

Atty Dkt: IDF 1504
4000-03000

Patent

Listings of claims:

1. (Currently Amended) A method for reducing the power required by an integrated services hub on a customer premises ~~supporting~~ converting digital network signals to analog telephony signals for a plurality of telephone circuits on the customer premises and providing ring current during the same ring cadence to all of the circuits then receiving calls, the integrated services hub comprising a ring voltage power supply and a backup battery, comprising offsetting the ringing interval of each of the plurality of telephone circuits by a preselected amount such that all the telephone circuits do not ring simultaneously during the same ring cadence;

whereby the size and power dissipation of the ring voltage power supply may be reduced and the backup battery life may be extended.

2. (Previously Presented) The method of claim 1 wherein the step of offsetting the ringing interval of each of the plurality of telephone circuits further comprises:

providing each telephone circuit with a ring cadence comprising a ringing interval and a non-ringing interval; and

defining a starting point for the ringing interval within each telephone circuit's ring cadence such that the starting point for the ringing interval for at least one telephone circuit falls substantially outside the ringing intervals of the remaining telephone circuits.

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3. (Original) The method of claim 2 wherein the step of defining a starting point for the ringing interval within each telephone circuit's ring cadence is defined such that the starting point for the ringing interval for each telephone circuit does not fall substantially within the ringing interval of any other telephone circuit.

4. (Original) The method of claim 3 wherein the ring cadence is a six second repeating cadence having a 1.5 second ringing interval and a 4.5 second non-ringing interval.

5. (Original) The method of claim 4 wherein the ring cadence has a granularity of 250ms.

6. (Original) The method of claim 4 wherein the ring signature is varied within the ringing interval.

7. (Original) The method of claim 1 further comprising dividing the plurality of telephone circuits into at least two channel bank groups and offsetting the ringing of the telephone circuits within each of the channel bank groups such that no more than about one telephone circuit from each channel bank group is ringing simultaneously.

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8. (Currently Amended) An apparatus for reducing the power required by an integrated services hub on a customer premises converting digital network signals to analog telephony signals for supporting a plurality of telephone circuits on the customer premises, the integrated services hub comprising a ring voltage power supply and a backup battery, comprising:

a plurality of subscriber line access circuits (SLICs) connected to and receiving power from ~~a~~ the ring voltage power supply, each SLIC connected to telephone circuit further comprising a telephone line for driving a ring voltage to a telephone connected to the telephone line; and

a microprocessor connected to and controlling the SLICs, the microprocessor providing each SLIC with a ring cadence for each telephone circuit comprising a ringing interval and a non-ringing interval; and defining a starting point for the ringing interval within each telephone circuit's ring cadence such that the starting point for the ringing interval for at least one telephone circuit falls substantially outside the ringing intervals of the remaining telephone circuits whereby all the telephone circuits do not ring simultaneously;

whereby the size and power dissipation of the ring voltage power supply may be reduced and the backup battery life may be extended.

9. (Original) The apparatus of claim 8 wherein each SLIC further comprises a positive terminal and a negative terminal connected to the ring voltage power supply and internal power amplifiers that drive power received from the ring voltage power supply via the terminals onto the telephone line.

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10. (Original) The apparatus of claim 8 wherein the plurality of telephone circuits is divided into at least two channel bank groups, the microprocessor connected to and controlling each of the channel bank groups such that no more than about one telephone circuit from each channel bank group is ringing simultaneously.